

AMENDMENTS TO THE CLAIMS

Claim 1. (Currently amended) A handling device for wafers (~~semiconductor disks~~) or other ~~disk-like substrates, which has~~ for use with a storage device in which a plurality of wafers can be arranged with their surfaces aligned substantially parallel to one another, one behind another and outside a transport container, the handling device comprising:

~~is provided with a gripping device with which~~ for removing individual wafers ~~can be removed from the storage device and/or inserted into the latter, characterized in that~~ or inserting individual wafers into the storage device, the gripping device (43) ~~has~~ having a plurality of grippers (44, 60) ~~which can be moved together but can be actuated~~ are actuatable independently of one another to independently grip the wafers; and

a movement device for moving the gripping device relative to the storage device,

~~it being possible in each case for at least one wafer to be gripped and/or inserted into the storage device (42) as a result of the actuation of a gripper (44, 60)~~ wherein a first one of the grippers is capable of gripping a first one of the wafers while the gripping device is in a first position, and

a second one of the grippers is capable of gripping a second one of the wafers while the gripping device is in a second position and the first gripper holds the first wafer.

Claim 2. (Currently amended) The handling device as claimed in claim 1, ~~characterized in that~~ wherein the number of grippers (44, 60) of the gripping device (43) corresponds to the number of wafers in a wafer batch or an integer multiple thereof.

Claim 3. (Currently amended) The handling device as claimed in claim 1, ~~characterized in that~~ wherein the grippers (44, 60) of the gripping device (43) are arranged on a common carrier (61) which can be moved parallel to the storage device (42) on a guide element (62).

Claim 4. (Currently amended) The handling device as claimed in claim 1, ~~characterized in that~~ wherein the grippers (44, 60) can be pivoted into two end positions, being located in a first end position in an empty position and in a second end position in a transport position for wafers of the gripping device (43), in which they transport wafers substantially parallel to the storage device (42).

Claim 5. (Currently amended) The handling device as claimed in claim 4, ~~characterized in that~~ wherein the pivoting movement of the respective gripper (44, 60) takes place in a plane which is aligned substantially orthogonally to the direction of movement of the gripping device (43) and parallel to the surfaces of the wafers of the storage device.

Claim 6. (Withdrawn)(Currently amended) The handling device as claimed in claim 1, ~~characterized in that~~ wherein one of the grippers (44, 60) of the gripping device (43) can be moved rectilinearly, substantially parallel to the surfaces of the wafers and transversely with respect to the direction of movement of the gripping device (43) independently of other ones of the grippers (44, 60) of the gripping device, being located in a first end position in an empty position and in a second end position in a transport position for wafers of the gripping device (43), in which they transport wafers substantially parallel to the storage device (42).

Claim 7. (Currently amended) The handling device as claimed in claim 1, ~~characterized in that~~ wherein it is possible to insert into the storage device (42) a number of wafers which at least substantially corresponds to an integer multiple of the number of wafers which can be handled simultaneously by the gripping device (43).

Claim 8. (Currently amended) The handling device as claimed in claim 1, ~~characterized by further~~ comprising a transfer station (40) arranged in the a travel path of the gripping device (43) and having a temporary store for the wafers, in which a plurality of the wafers can be arranged with their surfaces parallel to one another, ~~it being possible to use and the gripping device (43) to transfer~~ transfers wafers from the storage device (42) to the transfer station (40) and vice versa.

Claim 9. (Currently amended) A gripping device for handling a plurality of wafers ~~or other disk-like substrates~~, which has a plurality of grippers, ~~(44, 60)~~ each gripper ~~(44, 60)~~ being provided for at least one wafer, it being possible for the wafers to be arranged parallel to one another in the grippers ~~(44, 60)~~, for the grippers to be moved together but actuated independently of one another relative to the wafers, and in each case for at least one wafer to be handled as a result of the actuation of a gripper ~~(44, 60)~~.

Claim 10. (Currently amended) A storage device for temporary storage of wafers ~~or other disk-like substrates~~, which has a housing which forms an interior space in which there are a plurality of storage locations for transport containers of wafers, the storage device is provided with a

manipulator which handles the transport containers, ~~characterized in that~~ wherein at least part of the interior space is designed as a clean-room area, in which wafers can be handled outside transport containers and can be stored temporarily in a storage device (42) and there is at least one gripping device (43) which has a plurality of grippers (44, 60) which can be moved together but can be actuated independently of one another, it being possible in each case for at least one wafer to be gripped ~~and/or~~ and inserted into the storage device (42) as a result of the actuation of a gripper (44, 60).

Claim 11. (Currently amended) The storage device as claimed in claim ~~11~~ 1, ~~characterized by a handling device as claimed in one or more of the preceding claims 2 to 8~~ wherein the number of grippers of the gripping device corresponds to a number of wafers in a wafer batch or an integer multiple thereof.

Claim 12. (Withdrawn) A method of assembling a wafer batch, in which first of all wafers are arranged in a storage device as an initial wafer stack, individual wafers are then removed from the initial wafer stack by a gripping device and are arranged again in a predetermined order, characterized in that, firstly, a plurality of wafers (48) (48) are removed from the storage device (42) one after another by the gripping device (43) and only then are the wafers removed by the gripping device (43) passed on to the storage device (42) or to a holding device differing from the latter, wherein removal of the wafers from the storage device is performed by the gripping device that has a plurality of grippers which can be moved together but can be actuated independently of one another.

Claim 13. (Withdrawn) The method as claimed in claim 12, characterized in that the gripping device (43) is arranged in a specific position with respect to the storage device (42), the gripping device (43) removes a plurality of wafers (48) from the initial wafer stack in this position, the gripping device (43) is moved into at least one other position and passes on these wafers one after another to the storage device or to a holding device differing from the latter.

Claim 14. (Withdrawn) The method as claimed in claim 12, characterized in that the gripping device (43) grips wafers (48) of a wafer batch arranged in a transfer station, sets down the wafers (48) at storage locations belonging to the storage device (42) and stores the positions of each of the wafers (48) in the storage devices (42), together with data for the identification of the batch in which the wafer was previously located and/or data with respect to processing processes already passed through by the respective wafer.

Claim 15. (Withdrawn) The method as claimed in claim 12, characterized in that the gripping device (43) moves substantially parallel to a stack direction of the wafers between the removal of a first and the removal of a last wafer (48).

Claim 16. (New) The device of claim 1, further comprising means for depositing a plurality of the wafers while at least two of the grippers each grip a different one of the wafers.

Claim 17. (New) The device of claim 1, wherein the gripping device is capable of moving relative to the storage device in directions other than a transitory movement parallel to a longitudinal direction of the storage device.

Claim 18. (New) The device of claim 1 wherein the gripping device further comprises means for depositing wafers from the gripping device to a transfer device after the gripping device has moved to different positions along the storage device and has gripped in each of the different positions at least one wafer with different ones of the grippers.